National Institute of Environmental Health Sciences

A framework for integrated environmental health impact assessment of systemic risks

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Abstract:

Traditional methods of risk assessment have provided good service in support of policy, mainly in relation to standard setting and regulation of hazardous chemicals or practices. In recent years, however, it has become apparent that many of the risks facing society are systemic in nature - complex risks, set within wider social, economic and environmental contexts. Reflecting this, policy-making too has become more wide-ranging in scope, more collaborative and more precautionary in approach. In order to inform such policies, more integrated methods of assessment are needed. Based on work undertaken in two large EU-funded projects (INTARESE and HEIMTSA), this paper reviews the range of approaches to assessment now in used, proposes a framework for integrated environmental health impact assessment (both as a basis for bringing together and choosing between different methods of assessment, and extending these to more complex problems), and discusses some of the challenges involved in conducting integrated assessments to support policy. Integrated environmental health impact assessment is defined as a means of assessing health-related problems deriving from the environment, and health-related impacts of policies and other interventions that affect the environment, in ways that take account of the complexities, interdependencies and uncertainties of the real world. As such, it depends heavily on how issues are selected and framed, and implies the involvement of stakeholders both in issue-framing and design of the assessment, and to help interpret and evaluate the results. It is also a comparative process, which involves evaluating and comparing different scenarios. It consequently requires the ability to model the way in which the influences of exogenous factors, such as policies or other interventions, feed through the environment to affect health. Major challenges thus arise. Chief amongst these are the difficulties in ensuring effective stakeholder participation, in dealing with the multicausal and non-linear nature of many of the relationships between environment and health, and in taking account of adaptive and behavioural changes that characterise the systems concerned.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2621147

Resource Description

Communication: ☑

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience: ☑

audience to whom the resource is directed

Public

Exposure :

weather or climate related pathway by which climate change affects health

Unspecified Exposure

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Global or Unspecified

Health Impact:

specification of health effect or disease related to climate change exposure

General Health Impact

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Resource Type:

format or standard characteristic of resource

Research Article, Review

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content